
## B.

## ALFALFA FORAGE & SEED PRODUCTION FOR EXPORT MARKETS

1. What types of social/economic impacts might occur from the deregulation of GE/Roundup Ready alfalfa?

   *Consider potential regional differences, proximity to RR alfalfa seed/hay production, loss/gain of markets, unavailability of seed of choice, crop rotation changes, imports of organic seed, etc.*

   Mitigation strategies need to be developed. Potential positive economic impacts for U.S. alfalfa hay and seed producers. Could be additional rotational concerns associated with seed production RRA to conventional.

2. How much will gene flow from Roundup Ready alfalfa forage/seed fields affect non-GM alfalfa forage/seed systems, feral alfalfa or wild relatives of alfalfa over time?

   *Identify the sources of gene flow.*

   *How can industry and individual growers work together to mitigate gene flow?*

   *Consider pollen, seed mixtures and influence of transportation, humans, wind, water, insect and soil movement.*

   Wild relatives not relevant – no hybridization. Forage to forage gene flow is insignificant. Forage to seed pollen flow, certified seed production isolation requirements (165 ft) seem adequate to managing gene flow - but not all seed production is certified. Seed to seed isolation distances need to be tailored to pollinator (including unintended pollinators, such a neighboring honeybee hive). Science-based isolation distances to start, with verification on a commercial scale. Industry pinning map to identify biotech and AP sensitive seed production (use ASTA or other third party to address potential anti-trust concern?). Cropping history information sharing also? Will it be possible to establish industry standards?

3. How will gene flow or low-level presence of the Roundup Ready trait impact movement of conventional/organic alfalfa seed or forage to export sensitive markets?

   Need to make sure sustainable plan for supplying Non/low-GM seed for producing hay for AP sensitive markets. Develop third party (e.g.) processed-based certification system for seed (and forage?) to AP sensitive export markets.

4. What markets are of greatest concern and do those countries have mandatory/voluntary labeling systems and threshold levels in place?

   Saudi Arabia, Argentina are critical for seed export. However there is risk in most export markets, e.g. countries adopting EU standards. Hay is a market acceptance, not a regulatory issue – education?

5. How can growers of conventional alfalfa forage/seed and GE alfalfa forage/seed “peacefully coexist” in our ever-evolving global market and specifically, what tools are needed to ensure the long-term viability of all market opportunities?

   *Consider cost of responsible stewardship, segregation, education/training, contracts, isolation distances, parent seed sourcing, testing, quality management systems, timing isolation, equipment cleaning, zoning, technical assistance, etc.*

   Discussed above.